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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/486,561	02/29/2000	NOBUAKI HASHIMOTO	105030	8576

25944 7590 03/09/2004

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EXAMINER	
ZARNEKE, DAVID A	
ART UNIT	**PAPER NUMBER**
2827	

DATE MAILED: 03/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/486,561	HASHIMOTO, NOBUAKI	
	Examiner	Art Unit	
	David A. Zarneke	2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-8,11,12,14-16 and 21-26* is/are pending in the application.

4a) Of the above claim(s) *1,2,5-7 and 23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *8,11,12,14-16,21,22 and 24-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Specification

The amendment to the title of the invention is acceptable.

Response to Arguments

Applicant's arguments with respect to the rejection of claims 8, 11, 14-16, 21 and 22 under 35 U.S.C. §102(e) have been considered but are moot in view of the new ground(s) of rejection stated below.

Further, Applicant's arguments with respect to the rejection of claims 8, 11, 12, 14-16, 21 and 22 under both 35 U.S.C. §102(f) and 35 U.S.C. §102(g) have been fully considered and are persuasive. Therefore, these rejections have been withdrawn.

Election/Restrictions

Newly submitted claim 23 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The election dated 1/16/01 requested that the product claims be examined and withdrew all method claims. Newly submitted claim 23 is a method claim.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 23 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 8, 14-16, 21, 22, and 24-26 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Watanabe, US Patent 6,077,382 (figures 1-4, 4-4, 6, &/or 7-4).

The examiner wishes to clarify the meaning of "substantially", for purposes of examination. "Substantially" is taken to mean "being largely but not wholly that which is specified", as defined in the attached Webster's Ninth New Collegiate Dictionary. Therefore, the entire chip side surface need not be covered to meet this limitation.

As can be seen in the drawings, Watanabe teaches the chip side surfaces to be "substantially" covered.

Regarding claims 16, 21 and 22, Watanabe teaches at least a part of said adhesive having a thickness substantially the same as said semiconductor chip. In teaching the side surfaces of the chip are substantially covered, Watanabe inherently teaches **at least part** of the adhesive as being substantially as thick as the chip.

With respect to claims 24-26, Watanabe teaches a part of said adhesive covering substantially all area of said lateral surfaces of said semiconductor chip has part of said conductive particles dispersed therein (figures).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe, US Patent 6,077,382, as applied to claim 8 above, and further in view of Tsukagoshi et al., US Patent 5,804,882.

Watanabe fails to teach the adhesive as being provided to cover said interconnect pattern in its entirety.

Tsukagoshi teaches an adhesive having conductive particles dispersed therein wherein the adhesive as being provided to cover said interconnect pattern in its entirety (Figures 1-4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the adhesive coverage of Tsukagoshi in the invention of Watanabe because it is merely a matter an obvious matter of design choice. Design choices and

changes of size are generally recognized as being within the level of ordinary skill in the art (MPEP 2144.04(d)). A skilled artisan would know to cover the entire interconnect pattern because it would ensure a complete electrical connection between the chip and the substrate.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe, US Patent 6,077,382, as applied to claim 8 above, and further in view of Canning et al., US Patent 5,783,465.

Watanabe fails to teach the adhesive as including a shading material.

Canning teaches adding a pigment material (shading material) to an ACF film (5, 14+).

It would have been obvious to one of ordinary skill in the art to use the pigment of Canning in the invention of Watanabe because Canning teaches the conventionality of using a pigment in an ACF film. Pigments, or shading materials, are useful in films to provide color to the film or to reflect light away from sensitive materials.

The use of conventional materials to perform there known functions in a conventional process is obvious (*In re Aller* 220 F.2d 454,456,105 USPQ 233,235 (CCPA 1955)).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Zarneke whose telephone number is (571)-272-1937. The examiner can normally be reached on M-F 10 AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571)-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David A. Zarneke
Primary Examiner
February 25, 2004